

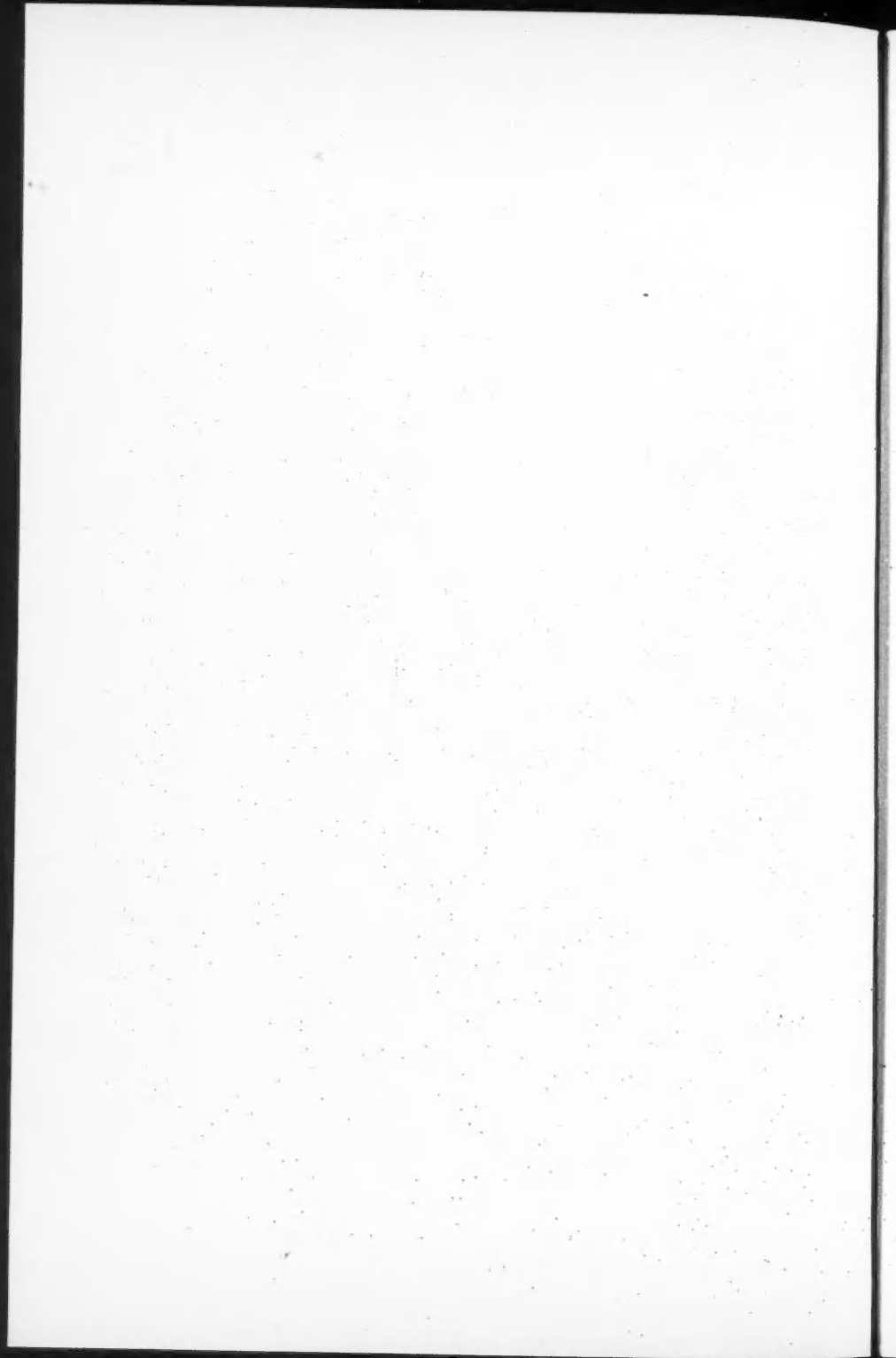
D IETING AND HEALTH

by

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DIET-CONSCIOUS AMERICANS are caught in the middle of a medical dilemma—whether to go on consuming more fat than probably is good for them or whether to take risks to health that may be involved in not getting enough fat. Because new medical knowledge shows a connection between consumption of fats and certain forms of heart disease, the idea is gaining popular credence that reducing the fat content of the daily diet may make heart attacks less likely. But nutritionists are concerned lest medically unauthorized tinkering with basic eating habits lead to harmful physical deficiencies.

This is not the first time that scientific advances in the field of nutrition have threatened to encourage irrational dietary practices. Discovery of the role of vitamins in the diet resulted in widespread over-use of vitamin pills. Many food faddists cite respected authorities for theories they propound, without realizing that they are making improper application of valid findings. And public interest in diet, especially in reducing diets, has created a rich market for food quacks who fleece the gullible of millions of dollars every year.

RESEARCH ON ROLE OF FATS IN HEART DISEASE

The high incidence of coronary heart disease in the United States, brought home to the public by President Eisenhower's heart attack in September 1955, stimulated medical research in this field. One of the questions given increased attention was whether diet contributed to the prevalence of heart trouble. Evidence piling up for years seemed to implicate the relatively high level of fat in the American diet.

Doctors have long known that a fatty substance called cholesterol usually occurs in abnormally large quantities in the blood of persons afflicted with atherosclerosis, a disease in which thickening of the artery wall may cause a stoppage in the flow of blood to the heart and produce the

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characteristic heart attack. It seemed reasonable to suppose that reduction of the intake of fats might reduce the accumulation of cholesterol and thus minimize the likelihood of a heart attack.

As research proceeded along this line, the problem appeared more rather than less complex. Some studies indicated that only certain fats were at fault, or that it was a question of the balance between saturated¹ and unsaturated fats. Other studies pointed to a basic defect in the way the body metabolizes fat, rather than to ingestion of fat itself, as the chief culprit.

The National Heart Institute of the U.S. Public Health Service has reported several major research advances in this area during the past year. Most important, scientists for the first time succeeded in producing a high incidence of coronary thrombosis, with resultant heart injury, in laboratory animals kept on diets containing a large proportion of saturated fats. The investigators have warned, however, that no one yet knows whether clogging of the arteries with fatty elements is the primary cause of the heart injury, or whether the fatty deposits are induced by a more fundamental condition affecting the artery wall.

Another research project of the National Heart Institute showed that patients susceptible to heart pain experienced a thickening of the blood, due to clumped blood cells, shortly after eating a fat-rich meal. Other studies, however, showed that the amount of cholesterol in the diet had little bearing on the development of atherosclerosis in animal subjects.

WARNINGS AGAINST DRASTIC CUT IN FAT INTAKE

The Food and Nutrition Board of the National Academy of Sciences-National Research Council has attempted to clarify the numerous scientific findings on the relation of fat to disease. The main purposes of a study completed this year were to determine whether existing standards for the basic American diet should be revised, and to ascertain the most fruitful avenues for future research. The board's report said in regard to cardiovascular disease:

It is premature and often presumptuous to implicate fat intake as the sole responsible factor when there are so many other possible unmeasured factors that may have an important influence either alone or in combination. . . . Direct evidence linking level of

¹ Generally speaking, those fats, mostly animal fats, which solidify at room temperature.

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fat in the diet with level of plasma cholesterol, and this in turn with incidence of atherosclerosis, is presently scanty.²

At another point the report described "evidence relating plasma cholesterol level to development of atherosclerosis" as "for the most part circumstantial." It found "general agreement that in man dietary cholesterol has but minor influence on plasma cholesterol levels and thus is probably not a prime factor in human cardiovascular disease."

The board decided not to recommend any reduction in the consumption of fats by normal, healthy individuals. In the 1958 edition of *Recommended Dietary Allowances*, the board said: "It is not yet possible to state definitely a reasonable allowance for fat in the diet or to indicate the characteristics of a fatty acid mixture most favorable for the support of health." Selection of a wide variety of vegetable and animal foodstuffs was endorsed as "most likely to maintain good health."

Caution in acting on proposals to reduce the fat intake of the general public is dictated by the high nutritional value of foods containing major sources of fat, such as meat, milk, eggs, butter, and fish oils. A Department of Agriculture research report has noted that "some fat is essential to good nutrition," and that several fats and oils contain fat-soluble vitamins and facilitate their absorption by the human system.³

ADVANTAGES AND HAZARDS OF SALT-FREE DIETS

Not long ago, it was salt that was gaining a bad reputation as a result of the findings of legitimate medical research, this time on the relationship between sodium in the diet and certain pathological conditions. It was discovered early in the 20th century that the quantity of sodium, the main component of common table salt, ingested by an individual was sometimes related to the formation of edema (abnormal accumulation of fluid in body cavities). Later it was found useful to restrict salt intake in cases of hypertension and some kidney diseases. Salt restriction without medical supervision, however, can prove dangerous.

The Food and Nutrition Board of the National Research

² National Academy of Sciences-National Research Council, *The Role of Dietary Fat in Human Health* (1958), pp. 20-21.

³ U.S. Department of Agriculture, Agricultural Research Service, *Essentials of An Adequate Diet* (1957), pp. 12-13.

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Council, reviewing data on the question of sodium in the diet, in 1954 supported restriction of sodium as a therapeutic measure for particular medical conditions, among them cirrhosis of the liver, toxemias of pregnancy, renal disease and Menière's disease. However, the board stressed the fact that sodium restriction may be harmful even in diseased conditions which it is intended to ameliorate.⁴

It was pointed out that in normal persons a physiological mechanism maintains proper sodium levels; any excess is readily excreted. If this mechanism is working properly, restriction of sodium in the diet of a patient suffering from edema will be medically effective. But if the mechanism is not functioning properly, the sodium concentration will fall. And if it falls far enough, it will lead to "sodium depletion or water intoxication and may be incompatible with life."

The major hazard in a low-sodium diet is that it necessarily excludes many of the common foods which are the main sources of human nutrition. A low-sodium diet is generally monotonous and dull in taste. Although a number of salt substitutes are available, they may have unpleasant side-effects; the Nutrition Board warned that they should be used only on recommendation of a physician.

Sugar has long been known as a key factor in diabetes. Victims of that disease suffer from a failure of the body's mechanism for utilizing sugar. Even when insulin came into use several decades ago as a life-saving measure for maintaining a safe blood sugar level, diabetics continued to guard their sugar intake. Medical attention has been directed more recently to a variety of symptoms of blood sugar deficiency, a condition known as hyperinsulinism, which also lends itself to dietary controls.

ERADICATION OF GOITER AND PELLAGRA BY DIET

Tremendous advances in public health followed the discovery that diet deficiencies may cause serious illness. In the United States two diseases once endemic—goiter and pellagra—were virtually eradicated by supplying the ingredients missing from the diet.

Goiter used to be prevalent in large areas of the Middle West, because of a deficiency of iodine in the soil. Mich-

⁴ National Academy of Sciences-National Research Council, *Sodium-Restricted Diets* (July 1954).

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igan was the first state to take corrective action by providing in 1924 for distribution of iodized table salt; within four years the incidence of goiter among that state's school children dropped from 38 to 9 per cent. Iodized salt is now generally available and goiter has become rare.

Thirty years ago there were 200,000 victims of pellagra in the United States and 7,000 died of the disease every year—a mortality rate of 6 per 100,000 of population. In 1937, niacin was identified as the pellagra-preventive vitamin. Four years later the practice of adding niacin to wheat flour, corn meal, and white bread was started, and within two years pellagra mortality had dropped to 1 per 100,000 of population. Today the disease is virtually unknown.⁵

The importance of good nutrition to health has long been recognized. But until half a century ago, the main factor in nutrition was thought to be the amount rather than the kinds of food consumed. Although several deficiency diseases had been successfully treated by dietary means—unpolished rice for beriberi, lemon juice for scurvy, fish oil for rickets—it was not known that lack of a particular vitamin was responsible for occurrence of those ailments.

Chemists led the way to nutritional knowledge by the analysis of foodstuffs, but medical science was slow to grasp the significance of their findings in ordinary practice. A pioneer in the chemistry of foods has noted that:

Even as late as 1916 pathologists manifested little interest in nutrition. . . . With very few exceptions medical men . . . were unable to think of the metabolic processes in terms of chemical systems. . . . [They] did not comprehend the idea that deficiency of some specific chemical substance could cause derangement of physiological processes and result in pathological states.⁶

The only components of foodstuffs known around 1900 were proteins, carbohydrates, fats, and inorganic salts. By 1940 at least 40 specific chemical substances had been identified as essential to an adequate diet. Popular dissemination of nutritional information created tremendous interest first in calories, then in minerals, and finally in vitamins.

Nutritional research is pushing ahead now to a better

⁵ A war food order issued in January 1943 required vitamin enrichment of all bakers' white bread. The program was so widely publicized that popular demand sustained the practice when the war order expired in 1946.

⁶ Elmer Verner McCollum, *A History of Nutrition* (1957), pp. 225-226.

understanding of the way the body handles its various nutriments. One of the current research projects at the National Institutes of Health involves study of the role played by enzymes, vitamins and hormones. Those substances have been described as "the key compounds that initiate, mediate and control the complex system by which the metabolic fuels—food, air and water—are converted into growth and energy, thus maintaining the structure of the body and the functions of life."⁷

Diet comes in for scrutiny in connection with nearly every degenerative illness. Even alcoholism and mental disease have been investigated from a dietary standpoint. Obesity, which appears to be intimately tied in with certain diseases, has become a problem of major medical concern. Causes of overeating and methods of overcoming bad eating habits are consequently receiving considerable attention.

Obesity Problem and Reducing Diets

OBESITY has been called "the gravest sign of malnutrition in the United States today."⁸ It is closely associated with a number of major degenerative diseases with high mortality rates, among them heart disease, diabetes, and cirrhosis of the liver. Even moderate overweight puts a burden on vital organs, and the overfed person frequently suffers from a nutritional deficiency. Fat children are no longer the medical ideal; they are often more sluggish than other children, take small part in the vigorous games of childhood, and are the butt of cruel jokes which may harm them psychologically. They are most likely to grow up to be obese adults, with attendant difficulties.

A medical survey of 6,000 cases of excess weight (more than 10 per cent) showed 75 per cent anemic, 37 per cent the victims of a nervous or psychogenic disturbance, 22 per cent with heart disease, 18 per cent diabetic, and 7 per cent with gall bladder trouble.⁹ According to the National In-

⁷ National Institutes of Health, U.S. Public Health Service, *Highlights of Progress in Research on Arthritis and Metabolic Diseases, 1957*.

⁸ Floyd S. Daft, director of the National Institute of Arthritis and Metabolic Diseases, *Nutrition and Public Health* (1958).

⁹ Dr. S. William Kalb, testimony, House Government Operations subcommittee, Aug. 2, 1957.

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stitutes of Health, "The most promising area for prevention of diabetes is in the control of obesity."¹⁰ The Institutes reported that in certain cases diabetic symptoms receded after the patient had reduced body weight, and that some patients improved to such an extent that they no longer needed to take insulin. Surveys carried out in both world wars showed that the incidence and severity of several degenerative diseases decreased in the years when food was in short supply and rose again when a richer diet was restored.

Insurance companies were the first to document the relationship between overweight and longevity. The Metropolitan Life Insurance Co. in 1930 published an analysis of data, gathered over a 20-year period, which showed that insured persons who were overweight died at an earlier age than those of normal weight. Another insurance study showed that mortality rates of persons suffering from degenerative diseases were considerably higher among those of more than normal weight: 257 per cent higher in the case of diabetes; for example, and 151 per cent higher in the case of circulatory diseases. Even accident and suicide rates were higher for overweight persons than for those of normal weight.¹¹

Clinical experience tended to confirm the mortality statistics of insurance companies. A number of medical inquiries completed during the 1930s pointed strongly to a connection between obesity and certain diseases. Data collected on the prior weight of 6,000 sufferers from diabetes who came to a Boston clinic over a period of years disclosed that approximately four-fifths were at least 5 per cent overweight. Studies of large groups of persons undergoing medical examination showed consistently that a condition of overweight was particularly prevalent among individuals with high blood pressure or impairment of heart or kidneys.

PECULIAR DIETS AND DANGERS IN DIETING CRAZE

Interest in reducing diets first took hold during the 1920s, when the vogue for the flapper figure induced many women to cut their weight to the point of emaciation. Little attention was paid to the nutritional quality of these diets,

¹⁰ National Institutes of Health, Progress Report, *Prevention of Obesity and Diabetes*, December 1955.

¹¹ Alfred J. Lotka, "Are Overweight People Unhealthy?" in Morris Fishbein, ed., *Your Weight and How to Control It* (1949), pp. 22-41.

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so long as they took off poundage. It was in this decade that stores began to sell various reducing devices, from rolling pins to rubber girdles, and that radio stations made a feature of early morning reducing exercises. Popular periodicals initiated a succession of "sure-fire" reducing diets and started a stream of dietary counsel to the plump which continues to this day.

One of the first of the popular fad diets was the Hollywood 18-day diet, said to guarantee the loss of a pound a day. The Hollywood diet became the rage.

Behind the 18-day diet was a mass of newspaper publicity and promotion that resulted in an astonishing vogue. Restaurants and hotels featured the diet in their announcements. Hostesses, anxious to please their dinner guests, called each of them by telephone to know which day of the 18 they had reached. . . . A Chicago butcher bragged that he ate the whole 18-day diet one morning for breakfast.¹²

The Hollywood diet provided little more than orange or grapefruit, egg and melba toast, with a tiny piece of lean meat allowed every few days.

One odd diet after another was promoted by faddists. Many stressed the supposed reducing features of a single food or food combination. A popular band leader took off many pounds by subsisting solely on soup. The pineapple-lamb chop combination was promoted on the theory that the interaction of the two foods promoted weight loss. Skim milk and bananas formed another much-touted combination. Milk farms were established where well-to-do women could slim down on a diet of liquids.

Chief faults of the fad diets were that they lacked necessary nutriments, did not still the pangs of hunger, and failed to establish good permanent eating habits. Most dieters quickly regained the lost weight when the diet days were over.¹³ Odd diets are still followed by individuals who hope a magic food formula will cause rapid weight loss. A recent one, dubbed the "See-Saw Reducing Plan," allows the victim to eat meagerly one day and all he wants the next day. The theory is that starvation on alternate days compensates for excess on other days, and that will

¹² Morris Fishbein, "Fads in Weight Reduction," *Your Weight and How to Control It* (1949), p. 154.

¹³ Doctors generally consider rapid fluctuations in body weight, due to periodic bouts of Spartan dieting, more damaging to the human system than remaining steadily stout.

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power on lean days will be sustained by the promise of plenty on the morrow.¹⁴

ROCKEFELLER RESEARCH ON LOW-PROTEIN DIETS

Most recommended reducing diets restrict consumption of fats, starches, and sweets and emphasize proteins like lean meat and eggs along with leafy vegetables and fruits. A few years ago the Rockefeller Institute for Medical Research began experimenting with reducing diets which called for a sharp reduction of proteins. Proteins stimulate the appetite, so it was hoped that by cutting down on proteins the appetite would be curbed and dieters would escape the hunger pangs which cause so many to quit a high-protein, low-calorie regimen.

One of the volunteers participating in the experiment wrote later that "the Rockefeller Diet reduced my weight steadily" without "the tortures of hunger, the feeling of sinking fatigue, the strain of sleeplessness and all the other mental pressures" he had suffered under other reducing diets.¹⁵ An appealing feature of the Rockefeller plan was that the dieter could eat all he wanted of foods like bread, butter, cream and jams—forbidden items on many reducing diets. It was expected that when intake of protein was low, the appetite would not demand an excess of such high-calorie foods. This unexpected dietary freedom was said to be of great psychological value in sustaining enthusiasm for the diet.

The diets developed by the Rockefeller Institute took several forms. One was a fairly normal assortment of nutritionally balanced foods, except that the daily protein intake was limited to about four ounces of meat or two small eggs. Another diet consisted solely of a liquid concoction designed to duplicate the components of mother's milk. It consisted of evaporated milk, dextrose, corn oil and water.

These experiments attracted wide attention. Magazine articles about them gave the impression that the long hoped-for panacea for overweight was at hand, and that at last one could reduce safely, scientifically, and without hunger. But the bubble soon burst. The American Medical Association's Council on Foods and Nutrition questioned the safety and effectiveness of a diet so low in proteins. Dr.

¹⁴ J. W. D. Grant, *Outwit Your Appetite* (1954).

¹⁵ Roy de Groot, *How I Reduced With the New Rockefeller Diet* (1956), p. 2.

Vincent Dole, who had directed the Rockefeller Institute's experiments, cautioned that the diet should be followed only under strict medical supervision. He disclosed also that a number of patients who reduced on the diet had regained weight as soon as they began to eat normally again.

Dr. Norman Jolliffe, director of the New York City Department of Health's Bureau of Nutrition, warned that a person who remained on the experimental diet too long would suffer a protein deficiency with accompanying nitrogen imbalance and injury to body tissue. The diet was said to be far too short in certain amino acids, known as the "building blocks" of the body, and "woefully inadequate" in iron.¹⁶

SOURCE OF APPETITE; NON-DIETARY REDUCING AIDS

The chief obstacle to weight reduction is simple hunger. A dieter must consume less than his body burns up. Feeding of the body on its stored supply of energy is seldom painless. A veteran of many reducing diets has described the ordeal as follows:

The first problem was the gnawing hunger that kept my mind off my work in the daytime and kept me restlessly awake at night. . . . Then there was the almost immediate need for daily use of laxatives. . . . I always felt sure, during the tortures of the first few days, that after a while I would get used to eating less, but that hope was always vain. . . . By the tenth day . . . it was increasingly hard to control the longing for a rich, creamy, buttery and filling dish.¹⁷

Medical science has only begun to explore the mysteries of the "hunger mechanism." No explanation has yet been found for the fact that some people, guided only by appetite, eat no more than necessary to maintain normal weight, while others so guided chronically overeat. A medical authority, asked to explain what causes a person to be hungry, replied: "Sometimes habit, sometimes the sight of food, sometimes the rapid emptying of the stomach. . . . Even talking about food makes people hungry sometimes."¹⁸ Many persons feel a compulsion to eat when under pressure, or when there is sickness or other trouble in the family. Psychiatrists assert that obese children overeat for comfort because they are emotionally deprived.

¹⁶ "Hazards of the Low-Protein Diet," *Science Digest*, November 1956, p. 12.

¹⁷ Roy de Groot, *op. cit.*, p. 7.

¹⁸ Dr. S. William Kalb, testimony, House Government Operations subcommittee, Aug. 2, 1957.

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Many mothers press too much food on their children or give sweets as a reward for good behavior, and thus establish a habit of overeating. Housewives may nibble constantly out of boredom or restlessness or simply because they spend so much time around food. Much overeating occurs between rather than during meals. A typical eating pattern of overweight persons is said to be a scanty breakfast, a light lunch, an enormous dinner, and considerable icebox-raiding before retiring.

Drugs are sometimes prescribed as reducing aids, but the public has been warned that their unsupervised use may be dangerous. Some 200 drugs have been tested for control of obesity, but no pill has yet been compounded which can satisfactorily substitute for food. Two types of drugs are used: a metabolic stimulator such as thyroid extract, and an appetite depressant such as amphetamine.

Physicians sometimes prescribe a drugless product, usually in the form of a cracker, which consists solely of a non-caloric filler such as methylcellulose. This product swells up when taken with water and is supposed to give a sense of fullness that discourages heavy eating at meal time. However, a doctor who has done extensive research in obesity control contends that, because the swelling takes place not in the stomach but in the intestine, it has no effect on hunger contractions.

ACTION AGAINST SCHEMES FOR PAINLESS REDUCING

Approximately one-fourth of the adult population of the United States is believed to be overweight. The proportion is highest in the middle years following age 35. The desire of many of these persons to be slim, coupled with aversion to scientific reducing diets, has given rise to a tremendous traffic in so-called aids to painless reducing. Rep. John A. Blatnik (D-Minn.), chairman of a subcommittee which investigated commerce of this sort last year, estimated that possibly \$100 million was spent annually on weight-reducing products, an outlay which Blatnik characterized as "a staggering amount of money to be wasted."¹⁹

Products currently sold over the counter for internal consumption contain either an appetite-depressant drug or a non-caloric filler, or the product may be simply a candy

¹⁹ House Government Operations subcommittee, *Hearings on False and Misleading Advertising (Weight-Reducing Preparations)* (1957), p. 55.

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pellet, possibly vitamin-fortified. In addition, it is possible to purchase numerous gadgets which are supposed to shake, roll, rub, or melt the fat away. Over the years since 1920, the Federal Trade Commission has investigated at least 250 reducing products, including candies, chewing gums, herbal teas, belts, corsets, girdles, sweat cabinets, vibrators, massage machines, and various pills containing minerals, vitamins, sugar, laxatives, digitalis, strychnine and other drugs.

Federal regulatory action in this field was directed in the 1920s and 1930s against products containing harmful drugs. One of the most dangerous was Marmola, a pill containing thyroid extract, which remained on the market for years as the case against it moved through the courts. The U.S. Supreme Court in 1936 finally sustained F.T.C. charges that the producer was guilty of unfair competition through false advertising.²⁰ Another eight years passed before the Food and Drug Administration won Supreme Court approval of action to bar the product from interstate commerce.

Fraud proceedings against harmless reducing preparations have been less successful. A federal Court of Appeals in February 1946 set aside an F.T.C. order against a candy reducing pill called Ayds on the ground that its exaggerated claims in advertising were mere "puffing or dealer's talk on which no charge of misrepresentation can be based." The same court dismissed an F.D.A. charge of misbranding on the ground that Ayds was a candy and "it [is] undisputed that eating candy before meals curbs the appetite." Officials of the federal agencies told the Blatnik subcommittee last year that these decisions had hampered efforts to protect the public against misrepresentation.

Physicians who testified before the subcommittee said that reducing pills containing phenylpropanolamine hydrochloride represented a health hazard because an overdose might cause palpitation of the heart, rise in blood pressure, insomnia, urinary retention, or a slowing down of activity in the gastrointestinal tract. Two doctors who tested this drug for control of obesity 20 years ago stated that in their opinion it should never be sold except on prescription. Dr. S. William Kalb said: "No person should allow himself

²⁰ The Marmola case is historically important because early court decisions, holding that injury to a competitor had to be proved in an unfair competition action, led Congress to authorize F.T.C. to act also against unfair trade practices which injured the public.

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to be placed in the position of taking any medication or any aids in following a desire to lose weight unless he is checked by a physician." Dr. Leon Hirsh, whose early scientific reports on the drug were cited without authorization in advertisements of a "no-diet reducing wonder drug," called the advertising "a deliberate falsehood" and the drug itself "potentially dangerous."

Authorities say that the various mechanical reducing aids are worthless. The Food and Drug Administration announced on Aug. 22 that it had seized six vibrating devices which were supposed to "break up fatty deposits so they can be carried off with other wastes." The agency warned that "Fat persons should not be taken in by promises that they can 'shake it off' with vibrator devices."

Fads and Frauds in Field of Nutrition

FOOD FADDISM is an ancient weakness of man. Since the dawn of history popular superstition has attributed special virtues to certain foods and condemned others as baneful. The European peasant at one time believed the potato helped spread the plague, while the tomato was regarded by some as an aphrodisiac and by others as a poison.

Many wise men of the past held peculiar ideas about food. Galen, early Greek physician, believed that fruits caused fevers. Cato the Censor thought that cabbage protected against disease. Hippocrates, father of medicine, condemned garlic, vegetables, and cheese as sources of gastric discomfort. Experience gave some justification for these beliefs, but they were put into practice without discrimination.

Even in modern times, men of science have been led by the results of limited experimentation to overrate the benefits of certain dietary practices. Russell H. Chittenden (1856-1943), one of the great American pioneers of nutritional science and founder at Yale of the nation's first physiological chemistry laboratory, held views on the deleterious effects of protein in the diet which are no longer countenanced. Horace Fletcher laid so much emphasis on the importance of thorough mastication that his follow-

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ers a half-century ago dutifully chewed each morsel of food at least 32 times.

VEGETARIANISM AND THE NATURAL FOOD CULTS

Meat is generally regarded as a prime mainstay of human strength, but its consumption has been looked upon also as the source of all evil, physical and spiritual. Many primitives thought that eating the flesh, and especially the heart, of a strong, fierce animal imparted strength and courage, and that the flesh of timid creatures had a weakening effect on man. The idea that meat per se is harmful has long been a favorite of faddists. Followers of the ancient Greek philosopher, Pythagoras, scorned meat. Other famous vegetarians included Plutarch the historian, Shelley the poet, Rousseau the philosopher, and in modern times the playwright, George Bernard Shaw, and the Indian leader, Mahatma Gandhi.

The first American to win an impressive following for vegetarianism was the temperance reformer, Sylvester Graham (1794-1851), whose name became permanently attached to a whole-grain wheat flour. Graham, who believed meat-eating induced a combative disposition, lectured widely on the benefits of Spartan living, of hard mattresses, open bedroom windows, cold baths, light clothing, and eating of fresh fruits and rough cereals. Horace Greeley was one of his converts, and the Graham regimen was imposed for a time, over student protests, at Oberlin College.

J. H. Kellogg, inventor of corn flakes and founder of the dry cereal industry, was one of the most influential promoters of vegetarianism. From 1876 until his death in 1943, Kellogg headed a sanitarium at Battle Creek, Mich., where the diet was strictly vegetarian, and he wrote numerous books and treatises extolling the meatless diet. Kellogg contended that the tissues of animal flesh contained toxic materials and "putrefactive bacteria" that settled in the meat-eater's intestines.²¹

Because vegetarians asserted that primitive man ate no meat, there was a tendency to associate vegetarianism with a number of naturalist cults. One naturalist group foreswore not only meats but also all cooked food. The man who claimed to be "father and founder of the raw food movement" wrote a book on "how to live 150 years

²¹ J. H. Kellogg, *The New Dietetics* (1921), p. 374.

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by back to nature methods." Advocating that man subsist solely on nuts, fresh fruit, and milk, he contended that on such fare "the sensibilities become keener and more delicate, the temperament more pliable . . . the mind more alert . . . the character . . . more noble and the soul more exalted." ²²

COMMON MISCONCEPTIONS ABOUT FOOD AND HEALTH

Most food fads develop from popular misconceptions about nutrition or from half-truths based on distortions of scientific fact. Discovery of the dietary importance of minerals and vitamins led to widespread dependence on concentrates of these elements rather than on well-rounded daily fare. This is an expensive way to obtain necessary nutrients, and it may have deleterious effects on vitamin-eaters who skimp nutritious foods.

Dr. W. H. Sebrell, Jr., former director of the National Institutes of Health, said in a talk on food faddism a few years ago that there would be wiser use of vitamin and mineral preparations if their role in nutrition was better understood. "The vitamins are neither dangerous drugs nor panaceas," he pointed out. "They are accessory food substances essential to the metabolism of other foodstuffs. . . . They are of no value to the body in the absence of substrata upon which to act, and the synthetic vitamins cannot be substituted for customary foods." ²³

Prevalent misconceptions which encourage food fads were cited. One is the belief that certain foods are inherently harmful. Dr. Sebrell put vegetarianism in this category. He said that while human beings can subsist on a non-meat diet, those who do so must choose what they eat with unusual care to make sure there is a proper balance of nutrients. Signs of protein deficiency, he said, are frequent among people who do not eat meat. Vegetarians who eat eggs and milk are better off than those who shun all animal products.

Dr. Sebrell suggested that adjustment of diet on the assumption that cholesterol caused heart attacks reflected "a modern food fear tending toward faddism." He considered abstention from milk, eggs, cheese and other cholesterol-containing fats "entirely unwarranted" on the basis

²² St. Louis A. Estes, *Raw Food and Health* (1927), p. 10.

²³ Symposium at Atlantic City, N. J., April 14, 1964.

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of evidence then available, unless ordered by a physician as a specific treatment. Prevalent unsupported dietary beliefs include the notions that acid and alkaline foods should not be eaten at the same time; that foods grown in chemically fertilized soils are nutritionally inferior; that dark bread is inherently more nutritious than white bread.

Food faddism may lead to malnutrition, and it may cause sick persons to rely on an unsuitable diet when they ought to seek medical advice. Faddism may also involve an economic penalty. Numerous so-called health foods cost a great deal more than common foods of equal or greater nutritional value. Dr. Sebrell said that "The nutritive value of yoghurt, wheat germ, seaweed, and so forth can be readily matched with inexpensive foods sold in any grocery store."

QUACK LECTURERS AND PEDDLERS OF HEALTH FOODS

Much misinformation about food and health is spread by unprincipled individuals or companies with a profit interest. Secretary of Health, Education and Welfare Arthur S. Flemming at a news conference on Nov. 18 called misrepresentation of vitamins, minerals, and other food supplements the "most widespread and expensive form of medical quackery in the country today." He declared that "The results can be tragic when unknowing or unscrupulous promoters distort the facts and claim benefits for their products far beyond the actual results." In twisting legitimate nutritional findings to their own purposes, modern food quacks are more sophisticated than the medicine men of a few decades ago. Dr. K. L. Milstead of the Food and Drug Administration told a recent meeting that "We are facing an organized dissemination of medical and nutritional quackery as well as an organized opposition to recognized medical treatment."²⁴

The man now in business as a food quack makes money on the lecture route by selling books, pamphlets, and "health foods." Usually an entertaining speaker, he victimizes his listeners by arousing fears that their aches and pains are due to inadequacies of the ordinary diet. A fanciful diet is the chief treatment offered at a number of sanitariums. One of these institutions a few years back featured a "mucusless" diet consisting chiefly of fruits and non-starchy

²⁴ Address before Public Relations Institute, American Medical Association, Chicago, Aug. 28, 1958.

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vegetables. Another put its patients on the Hay diet, which was based on the theory that carbohydrates and proteins set up incompatible reactions in the human system and should never be eaten together. Named for its promoter, Dr. William Howard Hay, this diet attained a considerable public following in the 1930s.

Efforts of government regulatory agencies to suppress food quackery run up against more difficulties than actions directed against purveyors of specifically harmful products. Gayelord Hauser won a considerable following with his books and lectures on the virtues of yoghurt, blackstrap molasses, and other foods not usually present in the American diet. Only when copies of his book, *Look Younger, Live Longer*, were displayed in a Rochester, N. Y., store, along with jars of blackstrap molasses, did the Food and Drug Administration step in with a seizure order. The agency charged that the tie-in sale constituted mislabeling; prospective customers had been shown passages in the book claiming that the product aided in restoring hair growth, bringing up low blood pressure, easing digestive disturbances, and adding "five youthful years to your life." Judge Harold S. Burke of the U.S. District Court at Buffalo upheld the F.D.A. seizure in a precedent-setting decision on Sept. 10, 1951.

Three years later the F.D.A. successfully prosecuted a so-called health lecturer, Adolphus Hohensee, who contended that improper diet leads to incrustations in the body which cause numerous diseases. The only cure for those ailments, Hohensee insisted, was to follow the diet he prescribed, and the diet included certain products that he had for sale. Hohensee's "come-on" was a series of free lectures at which he signed up gullible members of the audience for another series of paid lectures. In addition to such "health foods" as peppermint tea, wheat germ, and wheat germ oil, Hohensee sold various gadgets for their preparation and an assortment of books and pamphlets. It was estimated that he collected \$60,000 during a series of 19 lectures. In 1955 he was sentenced to a year in jail.

The food-regulating government agencies frequently warn the public to shun door-to-door salesmen of products for fortifying the normal diet. One of these "salesmen of health," who recently completed a term in prison, had a door-to-door scheme for selling a product called Vit-Ra-Tox.

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His salesmen were instructed to tell potential customers that malnutrition is widespread, due to deficiencies in the soil and the processing and cooking of foods, and that this is why cancer, diabetes, and other diseases are prevalent. Another product sold door-to-door which the F.D.A. succeeded in suppressing, was Nutrilite, a composite of alfalfa, parsley, watercress and vitamins, which was promoted with a sales talk that played on fear of serious illness.

An F.D.A. official recently pointed out that quackery is a difficult field to police; even convicted quacks soon return to the old stand after brief periods of confinement. "Enforcement . . . is difficult . . . because nutrition is a relatively new field of science and its literature includes much material on topics which have not been fully investigated." It follows that "Premature, over-enthusiastic and pseudo-scientific exploitation of nutritional theories and discoveries is common." The best answer to fraud and faddism in foods was said to be public education. "We must make the truth as easy to believe by the sick and gullible as the beguiling claims of the fakers."²⁵

²⁵ Dr. K. L. Milstead, Public Relations Institute, American Medical Association, Chicago, Aug. 28, 1958.

